### PATENT COOPERATION TREATY

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### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference								
IG-21203- WO	FOR FURTHER ACTION	Preliminary Examination Report (Form PCT/IPEA/4						
International application No.	International filing date (day/mon	nth/year) Priority date (day/month/year)						
PCT/US03/40797	22 December 2003 (22.12.2003)	24 December 2002 (24.12.2002)						
International Patent Classification (IPC)	or national classification and IPC							
	IPC(7): B01J 20/00 and US C1.: 502/400							
Applicant								
PRAXAIR TECHNOLOGY, INC.								
Examining Authority and is	ary examination report has been s transmitted to the applicant act at total of sheets, including the							
This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total ofsheets.								
<ol><li>This report contains indicat</li></ol>	ions relating to the following ite	ems:						
I Basis of the repor	rt							
II Priority								
III Non-establishmer	at of report with regard to novel	lty, inventive step and industrial applicability						
IV Lack of unity of i	invention	·						
V Reasoned stateme applicability; cita	V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement							
VI Certain document		<b>6</b> · · · · · · · · · · · · · · · · · · ·						
	the international application							
	= =							
VIII Certain observations on the international application								
Date of submission of the demand		f completion of this report						
23 July 2004 (23.07.2004)		ember 2004 (01.11.2004)						
Name and mailing address of the IPEA/US  Mail Stop PCT, Atm: IPEA/US		zefl officer						
Commissioner for Patents P.O. Box 1450	Edward	M. Johnson						
Alexandria, Virginia 22313-1450	Talanha	one No. 571-272-0987						
Facsimile No. (703) 305-3230 orm PCT/IPEA/409 (cover sheet)(July 199		10 110. 511 212-0501						

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.	
PCT/US03/40797	

I.	I. Basis of the report					
1.	With regard to the elements of the international application:*					
	$\boxtimes$	the international application as originally filed.				
	区	the description:				
		pages 1-26 as originally filed pages NONE , filed with the demand				
		pages NONE, filed with the letter of				
	$\boxtimes$	the claims:				
l		pages 27-29, as originally filed				
		pages NONE , as amended (together with any statement) under Article 10				
		, med with the demand				
	K -2	pages NONE, filed with the letter of				
	$\boxtimes$	the drawings:				
		pages 1-6, as originally filed				
		pages NONE , filed with the demand				
		pages NONE , filed with the letter of				
		the sequence listing part of the description:				
		pages NONE , as originally filed				
		pages NONE , filed with the demand				
2.	With	pages NONE , filed with the letter of				
_•	langi	regard to the language, all the elements marked above were available or furnished to this Authority in the				
		page in which the international application was filed, unless otherwise indicated under this item.  e elements were available or furnished to this Authority in the following language which is:				
	П	the language of a translation formished for the				
	Ħ	the language of a translation furnished for the purposes of international search (under Rule23.1(b)).				
	H	the language of publication of the international application (under Rule 48.3(b)).				
	ш	the language of the translation furnished for the purposes of international preliminary examination(under Rules 55.2 and/or 55.3).				
3						
<b>J.</b>	interr	Vith regard to any nucleotide and/or amino acid sequence disclosed in the international application, the				
		branching was carried out on the basis of the sequence listing:				
	H	contained in the international application in printed form.				
	H	filed together with the international application in computer readable form.				
	$\blacksquare$	furnished subsequently to this Authority in written form.				
		furnished subsequently to this Authority in computer readable form.				
	_] '	The statement that the subsequently furnished written assured to the				
	i	The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.				
Ī						
٠		The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.				
ιſ						
r. L		The amendments have resulted in the cancellation of:				
		the description, pages NONE				
	- 1	the claims, Nos. NONE				
	Ì	the drawings, sheets/fig NONE				
. Г	٦ ,					
٠ ٢	' '_ h	This report has been established as if (some of) the amendments had not been made, since they have been considered to go				
Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in *Any replacement sheet containing such amendments must be referred to in the report of the report of the report of the referred to in the referre						
Ť Ai	ıy rep	lacement sheet containing such amendments must be referred to under item 1 and annexed to this report.				
		The same report.				

#### INTERNATIONAL PRELIMINARY EXAMINATION REPORT

Form PCT/IPEA/409 (Box V) (July 1998)

International application No. PCT/US03/40797

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement						
1. STATEMENT						
Novelty (N)	Claims	1-10	YES			
- 7		NONE	NO			
Inventive Step (IS)	Claima	1.10	3/000			
inventive Step (13)	Claims Claims		YES NO			
Industrial Applicability (IA)	Claims		YES			
	Claims	NONE	NO			
2. CITATIONS AND EXPLANATIONS Claims 1-10 meet the criteria set out in PCT Article adsorbent bed having a bulk density greater than or e Claims 1-10 the criteria set out in PCT Article 33(4), claimed can be made or used in industry.  NEW CITATIONS	equal to 32 lb/f , and thus have	t <sup>3</sup> and a N₂ Henry's Law constant of gre	eater than 1.5 mmol/g.bar.			
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